

AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows:

1-8. (Cancelled)

9. (Currently amended) A method of forming one or more carbonaceous material projections, the method comprising the steps of:

applying a resist onto a carbonaceous material substrate;

forming holes in the applied resist, the holes being provided according to a predetermined arrangement, each hole having a wall surface, and the wall surface being inversely tapered from an aperture thereof toward a bottom thereof;

depositing mask material for a mask on the carbonaceous material substrate to form a mask deposition in each hole;

lifting off the mask material deposited on the resist together with the resist to form a mask, the mask having a shape of a circular cone and a circular truncated cone; and

etching the carbonaceous material substrate by using the ~~mask deposition as a mask~~ to form one or more carbonaceous material projections.

10. (Previously presented) The forming method of the carbonaceous material projection according to claim 9, wherein the carbonaceous material projections have a projected diameter of not more than 300 nm, and a density of the carbonaceous material projections is equal to or more than 4 projections/ μm^2 .

11. (Previously presented) The forming method of the carbonaceous material projection according to claim 9, wherein each carbonaceous material projection is of a conical shape.

12. (Previously presented) The forming method of the carbonaceous material projection according to claim 10, wherein each carbonaceous material projection is of a conical shape.

13. (Currently amended) A method of forming a carbonaceous material projection, the method comprising the steps of:

forming a film on a carbonaceous material substrate, the film being made of one of a silicon-based nitride (SiN_x : $0 < x < 1.33$) and silicon-based nitride oxide (SiO_xN_y : $0 < x < 2$, $0 < y < 1.3$);

applying a resist onto the film formed on the carbonaceous material substrate, patterning the resist by one of photolithography and electron beam exposure to form a patterned resist of a dot shape, and processing the film by use of the patterned resist as a mask; and

etching the carbonaceous material substrate by use of an etching mask including the processed film to form a carbonaceous material projection, an apex angle of the carbonaceous material projection being equal to or less than 39 degrees.

14. (Currently amended) A carbonaceous material projection structure comprising a plurality of carbonaceous material projections provided according to a predetermined arrangement, a density of the carbonaceous material projections being not less than 4 projections/ μm^2 , the plurality of carbonaceous material projections being formed by etching using a mask, and tips of the projections being smaller than roots of the projections.

15. (Currently amended) A carbonaceous material projection structure comprising a plurality of carbonaceous material projections provided according to a predetermined arrangement, each carbonaceous material projection having an approximately conical shape, the approximately conical shape being formed by etching a mask, and an apex angle of each carbonaceous material projection being not more than 39 degrees.

16. (Previously presented) The carbonaceous material projection structure according to claim 15, wherein a tip diameter of each carbonaceous material projection is not more than 50 nm, and a uniformity of heights of the carbonaceous material projections is within $\pm 5\%$.

17. (Previously presented) The carbonaceous material projection structure according to claim 15, wherein a projection density of the carbonaceous material projections is not less than 4 projections/ μm^2 .

18. (Previously presented) The carbonaceous material projection structure according to claim 16, wherein a projection density of the carbonaceous material projections is not less than 4 projections/ μm^2 .